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Joseph D. Kuborn  
Andrus, Sceales, et al  
100 E. Wisconsin Ave.  
Ste. 1100  
Milwaukee, WI 53202

EXAMINER

SMITH, TERRI L

ART UNIT

PAPER NUMBER

3762

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Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 09/682,421	<b>Applicant(s)</b> BRODNICK, DONALD E.	
	<b>Examiner</b> Terri L. Smith	<b>Art Unit</b> 3762	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed April 11, 2005 have been fully considered but they are not persuasive. Regarding the Applicant's arguments to rejections under 35 U.S.C. § 102, the Examiner respectfully disagrees.

In response to Applicant's argument that Segalowitz does not teach an acquisition module coupled to a plurality of electrodes for acquiring electrical signals from the plurality of electrodes, Examiner notes that the Applicant's specification does not specifically define and/or provide a definition for the Applicant's acquisition module. Applicant's specification states that an acquisition module is used to acquire, process, and temporarily store electrical signals from the electrodes. In the knowledge generally available to one of ordinary skill in the art, other acquisition modules perform either or a combination of these functions (i.e.; acquiring or processing or storing); the acquisition module referenced in Segalowitz does in fact acquire and process electrical signals from the electrodes. As Applicant indicated in the arguments, "Segalowitz teaches that element 381 ... can include a filter for moving or suppressing undesirable portions of the detected signal (Segalowitz, Col. 28, lines 31-33)"; to detect a signal is to acquire it and to move or suppress a signal is processing it. Examiner respectfully notes that Applicant's statement that "As is discussed in Segalowitz, the amp (184, 381) are used to merely amplify electrical signals before they are sent to an encoder or multiplexer" is not straightforwardly taught by Segalowitz as such. Rather, as discussed above herein, Segalowitz does teach that the amplifier performs as an acquisition module in that it acquires (detects) and processes (moves and suppresses) electrical signals.

Examiner acknowledges that Applicant's arguments to the 35 U.S.C. § 102 rejection are based upon "Segalowitz does not teach an acquisition module/device." Accordingly, Examiner's supporting arguments for an acquisition module (which also apply to the Applicants inclusion of an acquisition device per the amendment to claim 45), as stated above, address the Applicant's arguments to the 35 U.S.C. § 102 rejection.

2. Regarding the Applicant's argument to rejections under 35 U.S.C. § 103, the Examiner respectfully disagrees.

In response to Applicant's argument that "Because neither Segalowitz nor Ricketts discloses an acquisition module as taught and claimed in the present invention, their combination then does not teach that which is claimed and taught in the present invention," the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as conveyed in the Office Action [See paragraph 5 below for the complete disclosure of this rejection], the Examiner combined the Segalowitz reference disclosing an acquisition module with the Ricketts reference disclosing a belt adapted to be attached around the circumference of the patient's upper torso (Fig. 1), with a plurality of electrodes coupled to the belt (column 2, lines 45 – 46 and 53 - 56) to teach that which is claimed in the present invention. These same reasons apply to all combinations in this Office Action.

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Examiner acknowledges that Applicant's arguments to the 35 U.S.C. § 103 rejections are based upon none of the combinations teach an acquisition module as it interacts with other limitations. Accordingly, Examiner's supporting arguments for an acquisition module (which also apply to the Applicants inclusion of an acquisition module per the amendment to claim 60) and the combination of Segalowitz and Ricketts and all combinations in this Office Action, as stated above, address the Applicant's arguments to the 35 U.S.C. § 103 rejections.

### *Drawings*

3. The revised drawings were received on April 11, 2005. These revised drawings are acceptable.

### *Specification*

4. The disclosure is objected to because of the following informalities: On page 9, line 17, there is not a space between "PCT" and "where." (NOTE: In the preceding Non-Final Office Action, there was a typographical error indicating line 7 instead of line 17.).

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States. (NOTE: In the preceding Non-Final Office Action, the incorrect subparagraph was inadvertently inserted here. However, the correct subparagraph was designated in the subsequent references to this 102 rejection of the Office Action)

6. Claims 1, 5, 6, 15, 45, 49, 50, and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Segalowitz, U.S. Patent 5,511,553.

Regarding Claims 1 and 45, Segalowitz discloses a plurality of electrodes (Fig. 8) for attachment to the patient's upper torso (Figs. 8 and 17), wherein a plurality of electrodes does not include electrodes for attachment to the patient's limbs; an acquisition module/device (Fig. 8, element 184; Fig. 17, element 381) coupled to a plurality of electrodes for acquiring electrical signals from the plurality of electrodes; and a signal processor (Fig. 8, element 186; Fig. 17, element 382; Fig. 21, element 401) coupled to an acquisition module for generating a plurality of electrocardiogram precordial leads from the acquired signals (Fig. 8, precordial leads  $V_1 - V_6$ ). (NOTE: Examiner acknowledges incorrect reference to element 361 as pointed out by Applicant and had corrected it accordingly. Also, Examiner acknowledges the inclusion of an acquisition device per the amendment to claim 45 and asserts that this Office Action applies to its inclusion.)

Regarding Claims 5 and 49, Segalowitz discloses a signal processor generates a plurality of electrocardiogram precordial leads from the acquired electrical signals (column 27, lines 49 – 56, 64 – 66; column 28, line 1; column 35, lines 34 – 52) by generating an approximation of an electrical potential near the center of the patient's heart based on the acquired electrical signals (Fig. 17, element 321 with details of element 321 shown in Fig. 18; column 30, lines 57 – 58 and 60 – 62; column 31, lines 4 – 9).

Regarding Claims 6 and 50, Segalowitz discloses an approximation of an electrical potential near the center of the patient's heart is an approximation of Wilson's central terminal (column 30, lines 57 – 62). In view of a teaching on Wilson's terminal, Segalowitz teaches that the central terminal is the zero or reference point generally referred to as the central terminal

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(column 17, lines 63 – 67; column 18, lines 1 – 2).

Regarding Claims 15 and 59, Segalowitz discloses an electrocardiogram machine (Figs. 17 and 21, element 397) wirelessly coupled to the acquisition module (Figs. 17 and 21, elements 396) and a telemetry monitor (Figs. 17 and 21, element 398) coupled to the electrocardiogram machine (column 35, lines 53 – 59).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 – 4, 16, 30, 33 and 46 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz, and in view of Ricketts et al., U.S. Patent 4,026,278.

Regarding Claims 2, 16 (the portion covering the first two limitations of the device), 30 (the portion covering the first two limitations of the device), and 46, Segalowitz does not disclose a belt adapted to be attached around the circumference of the patient's upper torso, and wherein a plurality of electrodes are coupled to the belt so that when the belt is attached to the patient each one of the plurality of electrodes is generally positioned in a plane perpendicular to a longitudinal axis approximately defined by the patient's spine; a plurality of electrodes coupled to a belt, a plurality of electrodes including at least one electrode positioned within the belt so that when the belt is attached to the patient the electrode contacts the patient's chest, and at least one electrode positioned within the belt so that when the belt is attached to the patient the

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electrode contacts the patient's back, wherein the plurality of electrodes does not include electrodes for attachment to the patient's limbs (column 2, lines 45 – 46 and 53 – 56). However, Ricketts does disclose a belt adapted to be attached around the circumference of the patient's upper torso (Fig. 1), and wherein a plurality of electrodes are coupled to the belt (column 2, lines 45 – 46 and 53 - 56) so that when the belt is attached to the patient each one of the plurality of electrodes is generally positioned in a plane perpendicular to a longitudinal axis approximately defined by the patient's spine (Fig. 1) Ricketts also discloses a plurality of electrodes coupled to a belt, a plurality of electrodes including at least one electrode positioned within the belt so that when the belt is attached to the patient the electrode contacts the patient's chest, and at least one electrode positioned within the belt so that when the belt is attached to the patient the electrode contacts the patient's back, wherein the plurality of electrodes does not include electrodes for attachment to the patient's limbs (column 2, lines 45 – 46 and 53 – 56) to provide an improved means for rapidly and securely applying electrodes to a body member (column 1, lines 39 – 41).

Regarding Claims 3 and 47, Segalowitz does not disclose a belt is adapted to be attached around the circumference of a patient's upper torso at a level slightly below the patient's breast. However, Ricketts discloses a belt is adapted to be attached around the circumference of a patient's upper torso at a level slightly below the patient's breast (Fig. 1) to provide an improved means for rapidly and securely applying electrodes to a body member (column 1, lines 39 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include a belt adaptable to be attached around the circumference of a patient's upper torso and at a level slightly below the patient's breast, such that a plurality of electrodes are coupled to the belt so that when the belt is attached



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to the patient each one of the plurality of electrodes is generally positioned in a plane perpendicular to a longitudinal axis approximately defined by the patient's spine, as taught by Ricketts, to provide an improved means for rapidly and securely applying electrodes to a body member (column 1, lines 39 – 41).

Regarding Claims 4, 16 (the portion covering the last four limitations of the device), 30 (the portion covering the last two limitations of the device), and 48, Segalowitz discloses a transmitter (Fig. 17, element 383) coupled to an acquisition module (Fig. 17, element 381) and a plurality of electrodes for acquiring electrical signals from a plurality of electrodes (Fig. 8, element 184); and a receiver (Fig. 17, element 388) coupled to an electrocardiogram machine (Fig. 17, elements 397 and 398), wherein a transmitter (Fig. 17, element 383), an acquisition module (Fig. 17, element 381), and a signal processor for generating a plurality of electrocardiogram precordial leads from the acquired electrical signals (Fig. 17, element 382) are coupled to a belt (Fig. 17, element 321), wherein a receiver (Fig. 17, element 388) is coupled to an electrocardiogram machine (Fig. 17, element 397, 398), and wherein a plurality of electrocardiogram precordial leads are wirelessly transmitted from a transmitter to a receiver to a remote location (Fig. 17).

9. Claims 7, 14, 51, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz as applied to claims 1, 5, 45, and 49 above, and further in view of Shusterman et al., U.S. Patent 6,389,308.

Regarding Claims 7 and 51, Segalowitz does not disclose a signal processor generates an approximation of an electrical potential near the center of the patient's heart by determining a

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weighted combination of a plurality of the acquired electrical signals. However, Shusterman discloses a signal processor generates an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of a plurality of the acquired electrical signals (column 7, lines 48 – 50) to achieve the optimal sensitivity in the detection of hidden or small ECG changes (column 7, lines 40 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include a signal processor to generate an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of a plurality of the acquired electrical signals, as taught by Shusterman, to achieve the optimal sensitivity in the detection of hidden or small ECG changes (column 7, lines 40 – 41).

Regarding Claims 14 and 58, Segalowitz does not disclose an acquisition module is capable of storing precordial leads for approximately one month. However, Shusterman discloses an acquisition module (Fig. 1) is capable of storing precordial leads for approximately one month (Fig. 13; column 5, lines 66 – 67) for focusing on a patient's critical primary elements (column 5, lines 16 – 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include an acquisition module capable of storing precordial leads for approximately one month, as taught by Shusterman, for focusing on a patient's critical primary elements (column 5, lines 16 – 17).

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10. Claims 8, 11, 12, 52, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz as applied to claims 1 and 45 above, and further in view of GE Medical Systems Information Technologies, *ACI-TIPT Standard 12/15 – Lead Placement*.

Regarding Claims 8 and 52, Segalowitz does not disclose a plurality of electrodes includes a first electrode attachable to the patient's chest in approximately the fourth intercostal space at the right border of the sternum, a second electrode attachable to the patient's chest in approximately the fifth intercostal space at the anterior axillary line, a third electrode attachable to the patient's back in approximately the fifth intercostal space under the left mid-scapular line, and a fourth electrode attachable to the patient's back in approximately the fifth intercostal space under the right mid-scapular line. However, the article by GE Medical Systems Information Technologies, *ACI-TIPT Standard 12/15 – Lead Placement*, teaches that a plurality of electrodes includes a first electrode attachable to the patient's chest in approximately the fourth intercostal space at the right border of the sternum, a second electrode attachable to the patient's chest in approximately the fifth intercostal space at the anterior axillary line, a third electrode attachable to the patient's back in approximately the fifth intercostal space under the left mid-scapular line, and a fourth electrode attachable to the patient's back in approximately the fifth intercostal space under the right mid-scapular line (Figures on first and second pages) to provide guidelines for ECG placement to correctly determine ECG lead placement (first page).

Regarding Claims 11 and 55, Segalowitz does not disclose a plurality of electrodes includes a first electrode capable of being attachable to the patient's back in approximately the fifth intercostal space under the right mid-scapular line and at least one electrode attachable to the patient's chest. However, the article by GE Medical Systems Information Technologies,

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*ACI-TIPT Standard 12/15 – Lead Placement* discloses a plurality of electrodes includes a first electrode capable of being attachable to the patient's back in approximately the fifth intercostal space under the right mid-scapular line (first page) and at least one electrode attachable to the patient's chest (second page) to provide guidelines for ECG placement to correctly determine ECG lead placement (first page).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include a plurality of electrodes that includes a first electrode attachable to the patient's chest in approximately the fourth intercostal space at the right border of the sternum, a second electrode attachable to the patient's chest in approximately the fifth intercostal space at the anterior axillary line, as taught by GE Medical Systems Information Technologies, to provide guidelines for ECG lead placement to correctly determine ECG lead placement (first page).

Regarding Claims 12 and 56, Segalowitz discloses a signal processor uses a signal acquired from a first electrode (Fig. 18, element 363 on strip 321) as an approximation of an electrical potential near the center of the patient's heart (Fig. 17, element 321; column 31, lines 8 – 9).

11. Claims 9 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz, and GE Medical Systems Information Technologies as applied to claims 8 and 52 above, and further in view of, Shusterman, U.S. Patent 6,389,308.

Regarding Claims 9 and 53, neither Segalowitz nor GE Medical Systems Information Technologies disclose a signal processor generates an approximation of an electrical potential

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near the center of the patient's heart by determining a weighted combination of the signals acquired from a plurality of electrodes. However, Shusterman discloses a signal processor generates an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of the signals acquired from a plurality of electrodes (column 7, lines 48 – 50) to achieve the optimal sensitivity in the detection of hidden or small ECG changes (column 7, lines 40 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include a signal processor to generate an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of the signals acquired from a plurality of electrodes, as taught by Shusterman, to achieve the optimal sensitivity in the detection of hidden or small ECG changes (column 7, lines 40 – 41).

12. Claims 10 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz, GE Medical Systems Information Technologies, and Shusterman as applied to claims 9 and 53 above, and further in view of, Pritchard, U.S. Patent 5,615,687.

Regarding Claims 10, 24, 39, 54 and 67, Segalowitz nor GE Medical Systems Information Technologies nor Shusterman disclose a signal processor generates each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an electrical potential near the center of the patient's heart from each one of the signals acquired from a first electrode and a second electrode. However, Pritchard discloses a signal processor generates each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an

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electrical potential near the center of the patient's heart from each one of the signals acquired from a first electrode and a second electrode (column 1, lines 59 – 62) to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Shusterman to include a signal processor to generate each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an electrical potential near the center of the patient's heart from each one of the signals acquired from a first electrode and a second electrode, as taught by Pritchard, to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

13. Claims 13 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segalowitz, and GE Medical Systems Information Technologies as applied to claims 12 and 56 above, and further in view of, Pritchard, U.S. Patent 5,615,687.

Regarding Claims 13 and 57, Segalowitz and GE Medical Systems Information Technologies do not disclose a signal processor generates each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an electrical potential near the center of the patient's heart from each one of the signals acquired from the at least one electrode on the patient's chest. However, Pritchard discloses a signal processor generates each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an electrical potential near the center of the patient's heart from each one of the signals acquired

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from the at least one electrode on the patient's chest (column 1, lines 59 – 62) to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Segalowitz to include a signal processor to generate each one of a plurality of electrocardiogram precordial leads by subtracting an approximation of an electrical potential near the center of the patient's heart from each one of the signals acquired from the at least one electrode on the patient's chest, as taught by Pritchard, to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

14. Claims 60 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricketts et al., U. S. Patent 4,026,278, and in view of Segalowitz, U.S. Patent 5,511,553 and Shusterman, U.S. Patent 6,389,308.

Regarding Claim 60, Ricketts discloses positioning a plurality of electrodes on the patient's upper torso, a plurality of electrodes including at least one electrode positionable on the patient's chest and at least one electrode positionable on the patient's back (Fig. 1; column 2, lines 45 – 46 and 53 – 56), wherein a plurality of electrodes does not include electrodes for positioning on the patient's limbs. However, Ricketts does not disclose acquiring electrical signals from a plurality of electrodes with an acquisition module nor generating an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of a plurality of the acquired electrical signals and generating a plurality

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of electrocardiogram precordial leads from the acquired electrical signals by subtracting an approximation of the electrical potential near the center of the patient's heart from each one of the signals acquired from the at least one electrode on the patient's chest.

Nonetheless, Segalowitz discloses acquiring electrical signals from a plurality of electrodes (column 27, lines 49 – 56, 64 – 66; column 28, line 1; column 35, lines 34 – 52) with an acquisition module to transmit a single encoded radio frequency signal which carries the twelve-lead electrocardiographic multiple heart signals (column 27, lines 65 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Ricketts to include acquiring electrical signals from a plurality of electrodes with an acquisition module, as taught by Segalowitz, to transmit a single encoded radio frequency signal which carries the twelve-lead electrocardiographic multiple heart signals (column 27, lines 65 – 67).

Shusterman discloses generating an approximation of an electrical potential near the center of the patient's heart by determining a weighted combination of a plurality of the acquired electrical signals; and generating a plurality of electrocardiogram precordial leads from the acquired electrical signals by subtracting an approximation of the electrical potential near the center of the patient's heart from each one of the signals acquired from the at least one electrode on the patient's chest (column 7, lines 48 – 50) to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Ricketts to generate a plurality of electrocardiogram



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precordial leads from the acquired electrical signals by subtracting an approximation of the electrical potential near the center of the patient's heart from each one of the signals acquired from the at least one electrode on the patient's chest., as taught by Shusterman, to convert the raw electrical signals into meaningful information that can be displayed or printed out for review by a physician (column 1, lines 44 – 46).

Regarding Claim 71, Shusterman discloses the act of acquiring electrical signals from a plurality of electrodes (Fig. 1) includes the act of acquiring electrical signals for approximately one month (Fig. 13; column 5, lines 66 – 67).

### *Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this Final Action is set to expire **THREE MONTHS** from the mailing date of this Action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this Final Action and the Advisory Action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the Advisory Action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the Advisory Action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this Final Action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terri L. Smith whose telephone number is 571-272-7146. The examiner can normally be reached on Monday - Friday, between 7:30 a.m. - 4:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TLS

May 26, 2005

26 May 2005

  
GEORGE R. EVANISKO  
PRIMARY EXAMINER

5/26/5